Abstract of the Invention

This invention is a surgical device for producing a generally circular, interlamellar pathway within the corneal stroma of the eye. The device is made up of three major components: a vacuum centering guide having an inner bore which fits at one end against the front of the eye, a barrel which fits within the inner bore of the centering guide and to which is attached the third major component, a generally circular dissecting ring. The dissecting ring is shaped in such way that when an eye surgeon twists the barrel to which the ring is attached, the ring moves through the interlamellar space in the stroma producing the desired channel or pathway. The centering guide may optionally include a ring having one or more pins which firmly engage the cornea's epiphilium. The constituent parts of the surgical device, particularly the dissecting ring, also form a part of this invention.

A split ring, or intracorneal ring ("ICR"), is inserted into the intrastromal passageway produced by the inventive device. The ICR changes the shape of the cornea and, in doing so, provides a chosen measure of visual correction.